

REMARKS

Claims 1, 7-9, 15-17, 23-25, and 31-32 are pending in the application. Claims 1, 7, 9, 15, 17, 23, and 25 have been amended and claims 3, 5, 6, 11, 13, 14, 19, 21-22, 27, 29, and 30 have been canceled. Applicant submits that the pending claims as amended are in condition for allowance.

Claims 1, 7, 9, 15, 17, 23, 25, and 31 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,704,812 to Bakke et al. (hereinafter referred to as "Bakke"). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). To anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988). Bakke fails to teach or disclose all the elements of claim 1.

Amended claim 1 recites, an apparatus comprising: a main memory for storing data; one or more I/O devices for receiving data from or sending data to said main memory; a control unit for controlling said I/O devices; at least one I/O processor (IOP) for controlling I/O operations for sending data between said main memory and said I/O devices; a plurality of channels between said IOP and said control unit, said channels including multiple channel paths for carrying data between said main memory and said I/O devices during said I/O operations, said channels including- at least one enterprise system connection (ESCON) channel, at least one Ficon Bridge (FCV) channel, and at least one Ficon Native channel (FC), each channel keeping a copy of channel busy data (CBD), said IOP keeping a copy of the CBD for each channel, said ESCON channel keeping a busy vector and a one deep queue full vector, said FC channel keeping DMA thresholds, number of exchanges, and queue totals; and a computer program executed by said IOP for selecting one of said channel paths as the next channel path to carry data between said main memory and said I/O devices, said computer program determining a path weight, said path weight being assigned to a path by

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building a path weight table, said path weight being adjusted to enable comparison between different types of channels, said path weight being based on said busy vector and said one deep queue full vector for said ESCON channel, said path weight being based on said DMA thresholds, said number of exchanges, and said queue totals for said FC channel; wherein each said channel has an affinity to one of said IOP.

Bakke does not teach or disclose all of the elements of claim 1. Specifically, Bakke does not teach or disclose a plurality of channels between said IOP and said control unit wherein each said channel has an affinity to one of said IOP. On page 7 of the office action Examiner states, "Examiner agrees that a distinction exists; in particular claim 8 recites 'picking a candidate that has affinity to the IOP with the least number of work elements on its work queue.'" Claim 1 has been amended to include the limitation from claim 8 that each said channel has an affinity to one of said IOP.

Additionally, Bakke does not teach or disclose determining a path weight, said path weight being assigned to a path by building a path weight table, said path weight being adjusted to enable comparison between different types of channels, said path weight being based on said busy vector and said one deep queue full vector for said ESCON channel, said path weight being based on said DMA thresholds, said number of exchanges, and said queue totals for said FC channel. For a claim to be anticipated, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Bakke does disclose in complete detail the determination of a path weight, rather, Bakke discloses a broad list of factors that may be used for selecting a path.

Therefore, Bakke does not teach or disclose all of the elements of claim 1. Claims 9, 17, and 25 are believed to be allowable for at least the reasons stated for claim 1. Claims 7-8, 16-17, 23-24, and 31-32 depend from claims 1, 9, and 25 and are believed to be allowable due to this dependency.

Claims 1, 7-9, 15-17, 23-25, and 31-32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,574,667 to Blumenau et al. (hereinafter referred to as "Blumenau"). Blumenau fails to teach or disclose all the elements of claim 1.

Amended claim 1 recites, an apparatus comprising: a main memory for storing data; one or more I/O devices for receiving data from or sending data to said main memory; a

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control unit for controlling said I/O devices; at least one I/O processor (IOP) for controlling I/O operations for sending data between said main memory and said I/O devices; a plurality of channels between said IOP and said control unit, said channels including multiple channel paths for carrying data between said main memory and said I/O devices during said I/O operations, said channels including- at least one enterprise system connection (ESCON) channel, at least one Ficon Bridge (FCV) channel, and at least one Ficon Native channel (FC), each channel keeping a copy of channel busy data (CBD), said IOP keeping a copy of the CBD for each channel, said ESCON channel keeping a busy vector and a one deep queue full vector, said FC channel keeping DMA thresholds, number of exchanges, and queue totals; and a computer program executed by said IOP for selecting one of said channel paths as the next channel path to carry data between said main memory and said I/O devices, said computer program determining a path weight, said path weight being assigned to a path by building a path weight table, said path weight being adjusted to enable comparison between different types of channels, said path weight being based on said busy vector and said one deep queue full vector for said ESCON channel, said path weight being based on said DMA thresholds, said number of exchanges, and said queue totals for said FC channel; wherein each said channel has an affinity to one of said IOP.

Blumenau does not teach or disclose all of the elements of claim 1. Specifically, Blumenau does not teach or disclose determining a path weight, said path weight being assigned to a path by building a path weight table, said path weight being adjusted to enable comparison between different types of channels, said path weight being based on said busy vector and said one deep queue full vector for said ESCON channel, said path weight being based on said DMA thresholds, said number of exchanges, and said queue totals for said FC channel. Rather, Blumenau discloses selecting a storage port from the list in a round-robin fashion. As the Examiner states, "at least this disclosure is an assignment of path weights," however, the disclosed method of assigning of path weights *only* considers the most recently used path to determine the path weights. For a claim to be anticipated, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Therefore, Blumenau does not teach or disclose all of the elements of claim 1. Claims 9, 17, and 25 are believed to be allowable for at least the reasons stated for claim 1.

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Claims 7-8, 16-17, 23-24, and 31-32 depend from claims 1, 9, and 25 and are believed to be allowable due to this dependency.

For the reasons advanced above, it is respectfully submitted that the application is in condition for allowance. Accordingly, reconsideration and allowance of the claims are respectfully requested. The Examiner is cordially requested to telephone, if the Examiner believes that it would be advantageous to the disposition of this case.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment, which may be required for this amendment, to Deposit Account No. 06-1130. In the event that an extension of time is required, or may be required in addition to that requested in any petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 06-1130.

Respectfully submitted,

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